

No. 97-21C

(Filed: December 14, 1999)

*****	*	Patent; Summary Judgment; 35 U.S.C.
CHEMICAL SEPARATION	*	§102(b); Validity under the “On-sale Bar”;
TECHNOLOGY, INC., et al.,	*	<i>Pfaff</i> test; Commercial Sale of Invention;
Plaintiffs,	*	Ready for Patenting; Material Questions of
v.	*	Fact
	*	
THE UNITED STATES,	*	
Defendant.	*	
*****	*	

Louis M. Tarasi, Jr., Pittsburgh, Pennsylvania, for plaintiffs.

Cameron Eliot, U.S. Department of Justice, with whom was *Acting Assistant Attorney General David W. Ogden*.

OPINION

This patent infringement suit is before the court on defendant’s motion for partial summary judgment. The defendant asks this court to declare U.S. Patent No. 5,370,800 invalid due to plaintiffs’ alleged violation of the “on-sale bar” of 35 U.S.C. §102(b)(1988). Following oral argument and after a careful review of the materials submitted by the parties, this court finds that the issue whether the plaintiffs violated the on-sale bar as to this patent presents material questions of fact and thus is not susceptible to summary judgment. Defendant’s motion for partial summary judgement is therefore DENIED.

I. Facts

The plaintiffs, Chemical Separation Technology, Inc. (CST), an Idaho corporation, and its president and major shareholder, S.M. Stevenson, are owners of a U.S. patent that relates to the treatment of waste water. The patent, U.S. Patent No. 5,370,800, (the 800 patent) was applied for on May 25, 1993, and granted on December 6, 1994. The patented “method” is used in an

apparatus constructed by CST known as a “portable interim treatment system” (PIT System). The PIT System, using a series of chemical agents, precipitates hazardous minerals and compounds from industrial waste water, thereby cleaning the water. A critical feature of the “method,” according to the plaintiffs, is the addition of cationic and anionic polymers¹ to the polluted water, thereby causing the minerals to clump together (flocculate) and producing water with metal ion concentrations below EPA limits.

Prior to April 1992, CST had a number of prototype waste water treatment systems running involving physical plants very similar, if not identical, to the PIT System. At least two of these systems were being used in coal refuse landfills in Pennsylvania. An additional apparatus was in operation at the Pennsylvania Electric Company in Indiana, Pennsylvania, designed to precipitate iron, a ferrous metal, with the incidental removal of manganese and aluminum.

On April 14, 1992, CST made a formal offer of sale of a waste water treatment facility using the PIT System to Summitville Consolidated Mining Company (“Summitville”), a subsidiary of Galactic Resources, Inc., to remove copper from waste water produced at its gold mine in Summitville, Colorado. This offer was accepted by Summitville on April 24, 1992, and a purchase order was signed by an agent of Summitville on May 5, 1992. According to the plaintiffs, the system needed at the Summitville site was fundamentally different than that in use at the Indiana, Pennsylvania site, because the latter system was incapable of dealing with the copper-laden waste water produced at Summitville. In an effort to develop a polymer method that would deal with nonferrous pollutants such as copper, Mr. Stevenson allegedly engaged in an additional round of experimentation that was not completed until August 5, 1992. As such, plaintiffs allege that what they sold to Summitville in the spring of 1992 was an unfinished water treatment system, as the specific chemical process for removing non-ferrous metals, including the specific polymers, dilution, dosage or injection points to be used to effect the removal of non-ferrous minerals, was then incomplete.

Following the installation of the PIT System at Summitville, a number of different polymers were utilized, with varying degrees of success. Penny McPherson, the environmental manager at the Summitville mine, contacted the United States Department of Natural Resources and the Colorado Department of Health by letter of August 31, 1992, regarding the state of waste

¹ A polymer is macromolecule, a string of organic or inorganic molecules, formed by the chemical union of at least five identical monomers, which are simple molecules or compounds usually made of carbon and exhibiting simple structure and low molecular weight. *See Hawley’s Condensed Chemical Dictionary* 900 (13th ed. 1997). A cationic polymer exhibits a positive ionic charge, while an anionic polymer exhibits a negative ionic charge. *Id.* at 77, 223-24. Polymers aid in flocculation by forcing suspended metal particles to aggregate into clumps or tufts as they pass through a solution containing these long chains of inorganic or organic compounds. *Id.* at 506.

water treatment and copper removal. Her letter suggests that the specific polymer mix was not finalized until August of 1992.²

The PIT System was left in place at the Summitville site after Galactic abandoned the site. In December, 1992, defendant, through the EPA, began an emergency Superfund response action at the Summitville site. An outside firm, the Environmental Chemical Company (ECC), was retained to serve as the emergency response contractor to manage the clean-up of the site. The clean-up included treatment of waste water, which ECC accomplished by using the PIT System already installed at the site. In 1993, ECC issued a request for proposals (RFP) seeking contract bids for enhancing the capacity of the PIT System. CST submitted a proposal, but ECC chose not to award the contract and performed the work on the PIT System itself.

Plaintiffs claim that: (i) ECC performed this enhancement, a modification that resulted in an operation of the PIT System at an unlicensed rate;³ (ii) defendant allowed ECC to perform this work without a license; and (iii) defendant has continued to use plaintiffs' patents without license since 1993. Plaintiffs filed their complaint in this court on January 13, 1997, seeking compensation under 28 U.S.C. §1498 for defendant's infringement of all 25 of the claims contained in the 800 patent. Plaintiffs also seek just compensation for defendant's unlicensed use of plaintiffs' patented technology under the takings clause of the Fifth Amendment.

Defendant filed its motion for partial summary judgment on April 28, 1999, responding to the claim of infringement by asking this court to declare the 800 patent invalid due to

² Her letter reads, in pertinent part:

[The PIT System was restarted] on July 27 . . . and [Summitville] directly inject[ed] the . . . polymer in the stream. Only moderate success was achieved with this direct injection method and the quality of the solution in the PITS tanks was not sufficient for discharge. It was evident a near-neutral pH water source would be needed to achieve proper Allied Colloids polymer dosages to the PITS and [Summitville] placed a pump and circulation pipeline in the clear solution (pH 7-8) near the top of the #2 clarifier tank. The Allied Colloids polymer was not compatible with this solution. . . . [Summitville] asked for technical assistance in solving the flocculation and sludge formation problems at the PITS. . . . Once . . . a polymer had been found that could be used with the PITS effluent . . . the PITS performed very satisfactorily.

³ The PIT System was sold under a license to treat 100 gallons per minute and to precipitate out 40 pounds of minerals (specifically copper, a non-ferrous mineral) a day; following modification by ECC, the PIT System was operating at a minimum of 300 gallons per minute and 560 pounds of copper precipitation per day.

plaintiffs' violation of 35 U.S.C. §102(b).⁴ Defendant claims that the PIT System was offered for sale more than one year before May 25, 1993, the critical date upon which the plaintiffs first applied for a patent, and that the PIT System was "ready for patenting" on or prior to this date. In support of this claim, defendant relies, *inter alia*, on deposition testimony given by Mr. Stevenson on March 26, 1998, in litigation between ECC and CST, which it contends suggests that the PIT System was virtually complete in 1990 or 1991.⁵

In opposing this motion, plaintiffs argue that the subject of the 800 patent was not the PIT System, *per se*, but rather a method hinging on the particular mix and ordering of flocculating agents used within the PIT System. They contend that while this polymer chemistry had been reduced to practice for ferrous metals before the critical date, as evidenced by its use at the Indiana, Pennsylvania, site, it was not developed for copper-laden pollutant streams, such as that present in Summitville, which involved both ferrous and nonferrous minerals, until several months after the critical date. As such, they contend there was no violation of the "on-sale bar" as to the method underlying the PIT System and incorporated into the 800 patent.

⁴ Section 102(b) of Title 35 provides, in pertinent part, that "[a] person shall be entitled to a patent unless –

(b) the invention was ... in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States."

The measuring date for purposes of applying this subsection – the date of the patent application from which the one-year period is measured – is often referred to as the "critical date."

⁵ This deposition testimony reads, in pertinent part:

Q: When did the metals removal process that you incorporated into the Indiana, Pennsylvania, unit become complete or finalized?

A. I think it became finalized sometime in '90, '91, in that area.

Q: Why didn't you apply for a patent at that time?

A: Because there were other developments and enhancements I wanted to add before I went for the patent application.

Q: Between '90 or '91 and the time you applied for the patent, May 25, 1993, what other developments or enhancements to the metals removal process did you include?

A: Primarily control and the need to eliminate a large piece of equipment we don't need any more.

II. Discussion

Summary judgment is as viable in a patent case as in any other. *See Becton Dickinson & Co. v. C.R. Bard, Inc.*, 922 F.2d 792, 795 (Fed. Cir. 1990). Summary judgment is appropriate when there is no genuine dispute as to any material fact and the moving party is entitled to judgment as a matter of law. *See* RCFC 56; *Anderson v. Liberty Lobby, Inc.*, 477 U.S. 242, 247-48 (1986). Disputes over facts that are not outcome-determinative under the governing law will not preclude the entry of summary judgment. *See Anderson*, 477 U.S. at 248. However, summary judgment will not be granted if “the dispute about a material fact is ‘genuine,’ that is, if the evidence is such that a reasonable [trier of fact] could return a verdict for the nonmoving party.” *Id.* *See also Matsushita Elec. Indus. Co., Ltd. v. Zenith Radio Corp.*, 475 U.S. 574, 587 (1986); *California ex rel. Dept. of Transp. v. United States*, 27 Fed. Cl. 130, 135 (1992), *aff’d*, 11 F.3d 1071 (Fed. Cir. 1993).

When reaching a summary judgment determination, a judge’s function is not to weigh the evidence, but to determine whether there is a genuine issue for trial. *See Anderson*, 477 U.S. at 249. *See also Agosto v. INS*, 436 U.S. 748, 756 (1978) (“[A] [trial] court generally cannot grant summary judgment based on its assessment of the credibility of the evidence presented”). The judge must determine whether the evidence presents a disagreement sufficient to require submission to fact finding, or whether it is so one-sided that one party must prevail as a matter of law. *See Anderson*, 477 U.S. at 250-52. In doing this, all facts must be construed in a light most favorable to the nonmoving party and all inferences drawn from the evidence must be viewed in the light most favorable to the party opposing the motion. *See Matsushita*, 475 U.S. at 586-87 (citing *United States v. Diebold*, 369 U.S. 654, 655 (1962)).

Under 35 U.S.C. §282 (1994 & Supp. III 1997), a patent is presumed valid and one challenging its validity bears the burden of proving invalidity by clear and convincing evidence. *See Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206, 1216 (Fed. Cir. 1998); *Innovative Scuba Concepts, Inc. v. Federated Indus. Inc.*, 26 F.3d 1112, 1115 (Fed. Cir. 1994). An issued patent is invalid if “the invention was . . . on sale in this country, more than one year prior to the date of the application for patent in the United States, . . .” 35 U.S.C. §102(b). The sale of the invention, which case law makes clear includes an offer for sale,⁶ must be for commercial gain and not merely for experimental use. The ultimate determination whether an invention was on sale within the meaning of section 102(b) is a question of law, based on the underlying facts. *See Tec Air v. Demo Manufacturing Michigan, Inc.*, 192 F. 3d 1353, 1357 (Fed. Cir. 1999); *Weatherchem Corp. v. J.L. Clark, Inc.*, 163 F.3d 1326, 1332 (Fed. Cir. 1998).

In *Bonito Boats, Inc. v. Thunder Craft Boats, Inc.*, 489 U.S. 141, 151-52 (1989), the Supreme Court explained that the “federal patent system . . . embodies a carefully crafted bargain for encouraging the creation and disclosure of new, useful, and nonobvious advances in

⁶ *See, e.g., D.L. Auld Co. v. Chroma Graphics Corp.*, 714 F.2d 1144, 1150 (Fed. Cir. 1983).

technology and design in return for the exclusive right to practice the invention for a period of years.” “In consideration of its disclosure and the consequent benefit to the community,” the Supreme Court further stated, “the patent is granted” and the inventor receives an exclusive monopoly for a limited period of time. 489 U.S. at 151. In this statutory context, section 102 “serves as a limiting provision . . . confining the duration of the monopoly to the statutory term.” *Pfaff v. Wells Electronic, Inc.*, 119 S. Ct. 304, 310 (1998). See also *King Instrument Corp. v. Otari Corp.*, 767 F.2d 853, 860 (Fed. Cir. 1985).

In *Pfaff*, the Supreme Court enunciated the standard for applying the “on sale bar.” Wayne K. Pfaff designed computer chip sockets. See 119 S.Ct. at 307. In 1980, Texas Instruments contacted Pfaff and asked him to design a special computer chip socket for the company. *Id.* Pfaff prepared detailed engineering drawings that described the design, the dimensions and the material to be used in the making of the socket. *Id.* Before the critical date, Pfaff showed a sketch of his concept to Texas Instruments. *Id.* Subsequently, but prior to the critical date, Texas Instruments forwarded a written order to Pfaff for the purchase of 30,100 sockets. *Id.* Although the invention was not reduced to practice and the order was not filled until after the critical date, the Supreme Court concluded that the “invention had been on sale for more than one year in this country before [Pfaff] filed his patent application.” 119 S. Ct. at 312.

In reaching its decision, the Supreme Court, recognizing the desirability of developing a “bright-line rule,” held that two conditions were required before the on sale bar applied. “First, the product must be the subject of a commercial offer for sale. . . . Second, the invention must be ready for patenting.” 119 S. Ct. at 311-12. The Court held that to demonstrate that an invention is ready for patenting a party could prove, *inter alia*, either that the invention was reduced to practice before the critical date or, “that prior to the critical date the inventor had prepared drawings or other descriptions of the invention that were sufficiently specific to enable a person skilled in the art to practice the invention.” *Id.* at 312.⁷ Because Pfaff’s drawings allowed the manufacturer to produce the socket, and the sockets manufactured contained all the elements of the invention, the Supreme Court held that the invention was ready for patenting. *Id.*⁸

Applying the *Pfaff* test to the facts of this case requires the defendant to establish the absence of a dispute of material fact in respect to the two elements of the “on sale” defense, namely, (i) that there was a definite commercial sale or offer for sale of the invention claimed in the 800 patent more than one year before the plaintiffs filed their patent application; and (ii) that at the time of that sale or offer for sale, the invention was ready for patenting. While the

⁷ See generally, Isabelle R. McAndrews, “*The On-Sale Bar After Pfaff v. Wells Electronics: Toward a Bright-Line Rule*,” 81 J. Pat. & Trademark Off. Soc’y 155 (1999).

⁸ The Federal Circuit has repeatedly applied *Pfaff* in its recent cases. noting that the decision supplants the Federal Circuit’s prior “totality of the circumstances” analysis of the “on sale doctrine.” See *Brasseler, U.S.A. I, L.P. v. Stryker Sales Corp.*, 182 F. 3d 888, 889-90 (Fed. Cir. 1999); *Weatherchem Corp.*, 163 F.3d at 1333.

defendant has met its burden as to the first prong of this test, the court concludes that material questions of fact exist as to the second prong of the *Pfaff* test, i.e., whether the invention was ready for patenting.

As to the first prong of the *Pfaff* test, it appears uncontroverted that the PIT System -- encompassing both an apparatus and chemical process -- was on sale prior to the critical date, May 25, 1992. In this regard, defendant correctly points out that in advance of the critical date, plaintiffs had made an offer to Summitville, that offer had been accepted, a purchase order had been submitted by Summitville, and Summitville had made its first lease payments to Vision Financial, a leasing agent facilitating the transaction between CST and Summitville. The existence of these events is clear and convincing proof that the invention in question was subject to a commercial offer prior to the critical date. See *Pfaff*, 119 S.Ct. at 311 (acceptance of purchase order makes clear that commercial offer made); *Weatherchem*, 163 F.3d at 1333 (signed purchase agreement evidence of commercial offer). See also *Evans Cooling Systems, Inc. v. General Motors Corp.*, 125 F.3d 1448, 1451 (Fed. Cir. 1997), *cert. denied*, 118 S.Ct. 1050 (1998) (discussing similar evidence of commercial offer).

Plaintiffs attempt to counter these facts by alleging that the sale to Summitville was an experimental use. To be sure, a sale of the flocculation method for experimentation rather than profit would not constitute a commercial sale for purposes of applying the first prong of the *Pfaff* test. See *Pfaff*, 119 S.Ct. at 311; *Zacharin v. United States*, 43 Fed. Cl. 185, 192 (1999). However, the Federal Circuit requires solid proof that the sale of an invention be “substantially for purposes of experiment,” basing the existence of such a defense on “the objective evidence of experimentation, including the number of prototypes and duration of tests conducted, whether test records and progress reports were kept, the existence of a secrecy agreement, whether the investor received compensation for use of the invention, and the extent to which the inventor controlled the testing.” *Zacharin*, 43 Fed. Cl. at 192. See also *LaBounty Mfg., Inc. v. United States, Int’l Trade Comm’n*, 958 F.2d 1066, 1071-74 (Fed. Cir. 1992). Here, plaintiffs have produced no evidence that such records and experimental protocols existed with respect to the Summitville sale.

The fact that the sale to Summitville was for commercial purposes, however, does not resolve the second prong of the *Pfaff* test, i.e., whether the invention was ready for patenting.⁹

⁹ At first blush, it might seem odd to conclude that the sale to Summitville was not for experimental purposes, but that it is unclear whether the invention was ready for patenting. But, the two prongs of the *Pfaff* test are not focused on the same phenomenon. The first prong looks, *inter alia*, to whether a prior sale was for profit, as opposed to experimental purposes, while the second prong focuses on the state of the invention itself. Given this, it appears conceivable that an inventor could sell or lease an invention for profit prior to the time the invention was fully developed. Indeed, this theoretical possibility must exist lest the two prongs of the *Pfaff* test converge into one – whether the invention was for sale commercially. Notably, prior to *Pfaff*, some decisions had employed this single-prong approach in deciding whether the “on sale bar”

Indeed, material questions of fact exist as to this prong of the analysis. In particular, further evidence is needed to determine whether the product on sale before the critical date was the “invention later claimed”¹⁰ – that is whether a comparison of the claims in the 800 patent to the PIT System in use at Indiana, Pennsylvania in 1991 and sold to Summitville in 1992 reveals that essentially the same invention or inventions were involved.

While defendant argues that the record is clear in this regard, the court does not agree, particularly when, as it must, it views the evidence and draws factual inferences favorably to the plaintiff, and especially in light of the clear and convincing evidence standard imposed on the defendant. Thus, for example, it is unclear from the record how critical the polymer chemistry (i.e., not only the polymers chosen, but when and how in the process those polymers were introduced) was to the success of the patented method and, if critical, when that chemistry was patentable.¹¹ Moreover, a material dispute exists as to whether the allegedly essential polymer chemistry was developed prior to the critical date, as defendant claims, or on or around August 5, 1992, as plaintiffs claim. Relatedly, questions exist as to whether the work done by Mr. Stevenson in the weeks leading up to August 5, 1992, was experimentation going to the core of the patent or merely fine tuning. *See Weatherchem*, 163 F.3d at 1334 (invention can be ready for patenting, even though an inventor continues to “fine-tune features not claimed in the patent”). Along these lines, further evidence is also needed to determine to what extent the chemistry required to flocculate non-ferrous metals was different from that necessary to flocculate ferrous metals – the latter process having been employed successfully by plaintiffs in 1991 at the Indiana, Pennsylvania site. Finally, also relevant to the second prong of the *Pfaff* analysis is information

applied. *See, e.g., Paragon Podiatry Laboratory, Inc. v. KLM Laboratories, Inc.*, 984 F.2d 1182, 1187 n.5 (Fed.Cir. 1993)(“[T]he thrust of the on-sale inquiry is whether the inventor thought he had a product which could be and was offered to customers, not whether he could prevail under the technicalities of reduction to practice”); *UMC Electronics Co. v. United States*, 816 F.2d 647, 657 (Fed.Cir. 1987)(“[T]he development of the subject invention was far beyond mere conception . . . and had been sufficiently tested to demonstrate to the satisfaction of the inventor that the invention as ultimately claimed would work for its intended purpose.”). However, in *Pfaff*, the Supreme Court explicitly rejected this approach, noting that “the possibility of additional development after the offer for sale in these circumstances counsels against adoption of [this] rule.” *Pfaff*, 119 S.Ct. at 312 n.14.

¹⁰ *See Sclatech, Inc. v. Retec/Tetra, L.L.C.*, 178 F.3d 1378, 1383 (Fed. Cir. 1999).

¹¹ The Patent and Trade Office’s file regarding the 800 Patent, which was jointly provided by the parties in supplementation of the record, adds an additional layer of mystery to this inquiry. From that file, it appears that the patent examiner initially was disinclined to grant the requested patent because he felt that the underlying chemistry was obvious. However, the patent examiner subsequently concluded that some aspect of the plaintiffs’ use of polymers -- perhaps the order in which aeration, neutralization, agitation and flocculent addition occurred -- went beyond prior art and he thus granted the patent.

concerning the nature of the guarantee made by the plaintiffs to Summitville -- that is, was it a typical money-back guarantee or a guarantee that highlighted the fact that the polymer chemistry had not yet been worked out. *See, e.g., LaBounty*, 958 F.2d at 1074 (noting that a “money-back guarantee is a typical commercial sales provision and does not establish an experimental relationship between the parties.”).

The plaintiffs thus have demonstrated a number of issues of material fact still in dispute that prevent this court, at this juncture, from finding in favor of either party.

III. Conclusion

In sum, based on the foregoing, the court concludes that the allegations concerning the validity of the 800 patent are not resolvable without a trial. Accordingly, defendant’s motion for partial summary judgment is DENIED.

Francis M. Allegra
Judge